FIGURE 2

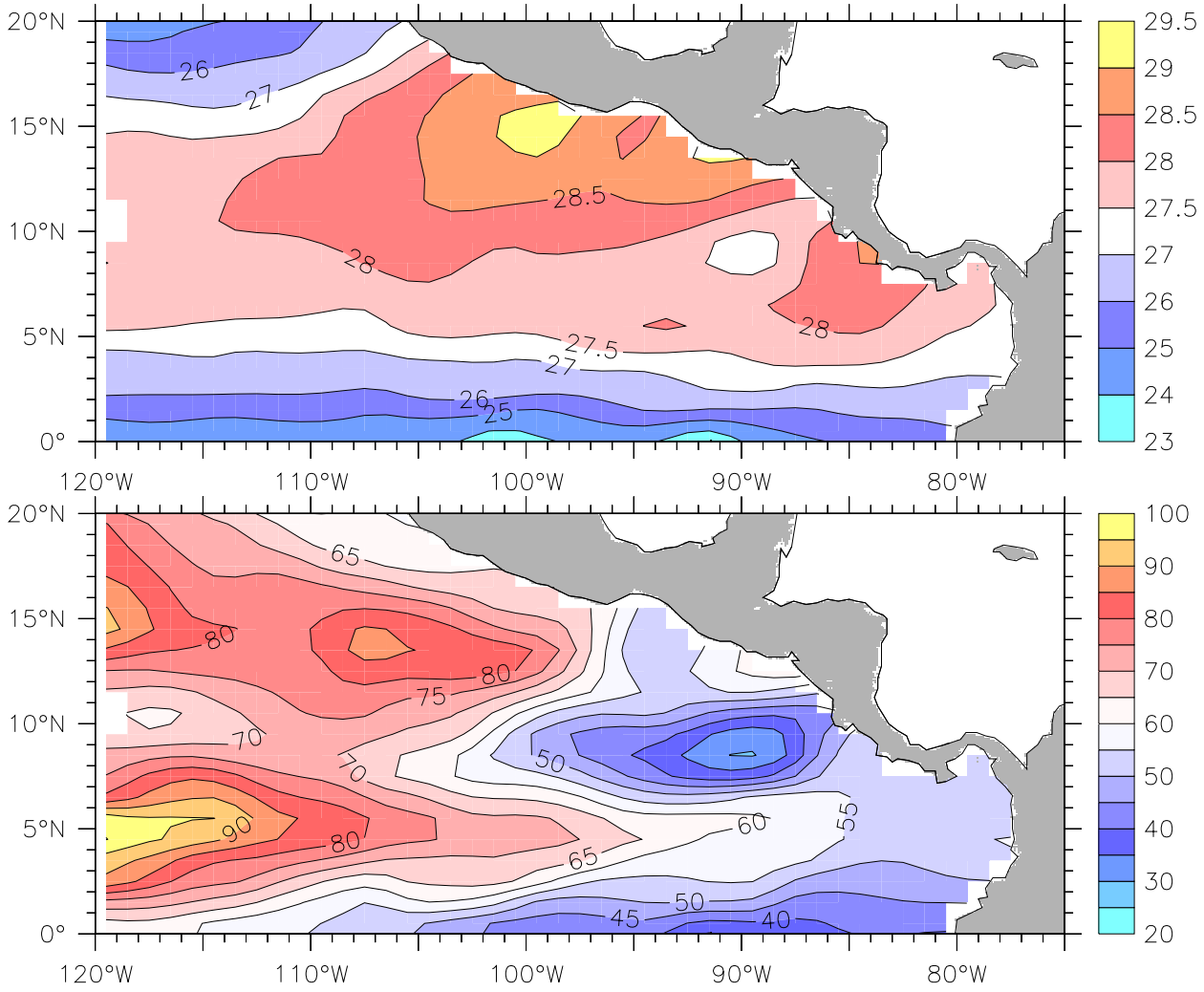

FIG. 2. Mean SST (top) and 20°C isotherm depth (Z20; bottom) from the XBT data. The contour interval for SST is 1°C, with supplementary contours at 27.5°C and 28.5°C. Red shading indicates warm SST, blue cool. The contour interval for Z20 is 5 m. Red shading indicates deep thermocline, blue shallow.

FIGURE 4

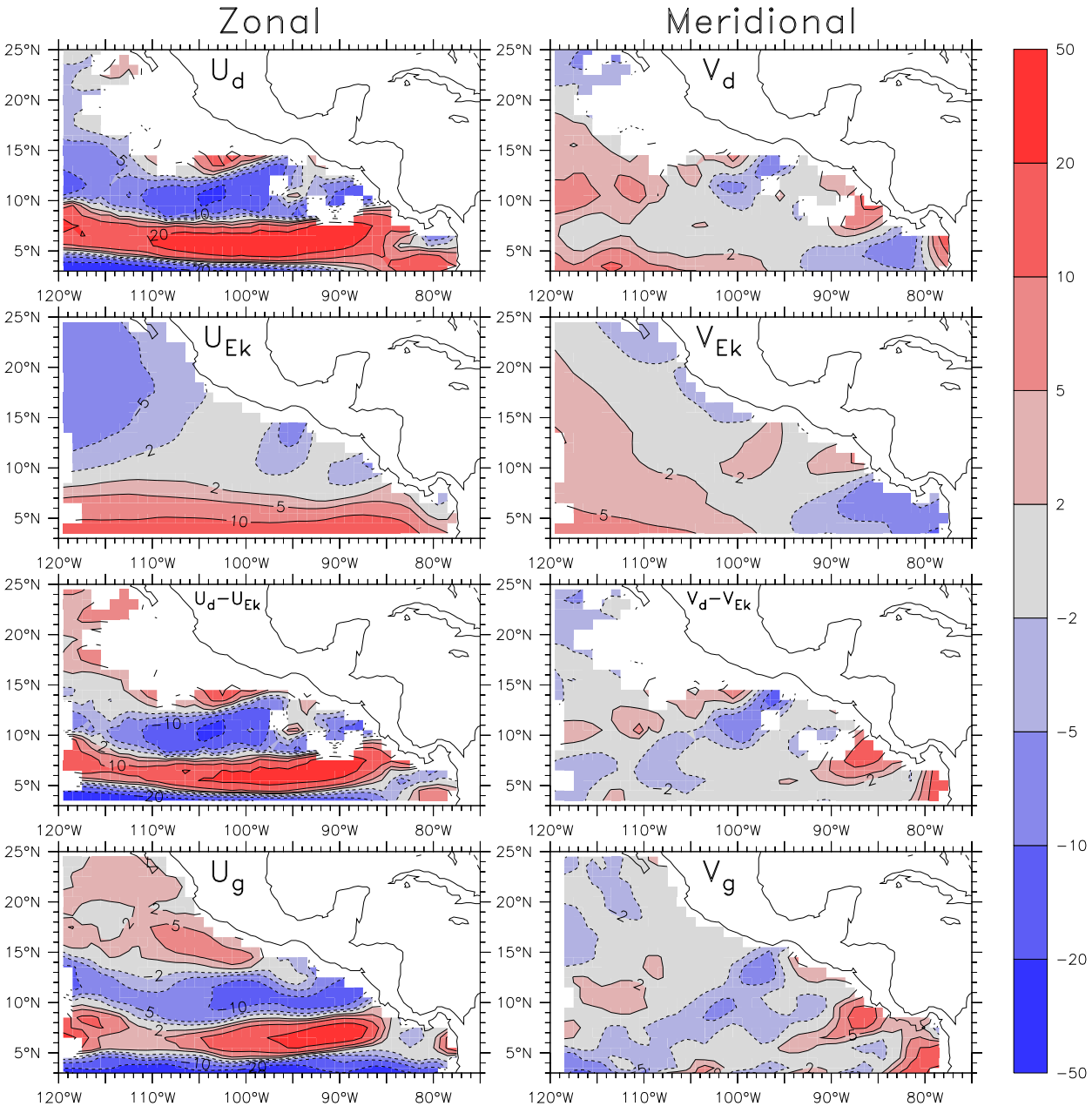

Figure 4. Mean drifter, Ekman and geostrophic near-surface currents (cm s^{-1}). Left panels show the zonal component, right panels the meridional component. Top panels: drifter velocity (blank areas indicate sparse or absent sampling); second panels: Ekman velocity from the Quikscat winds with the Ekman depth estimated according to Ralph and Niiler (1999) (see section 4b); third panels: Drifter minus Ekman velocities; bottom panels: geostrophic velocities.

FIGURE 5

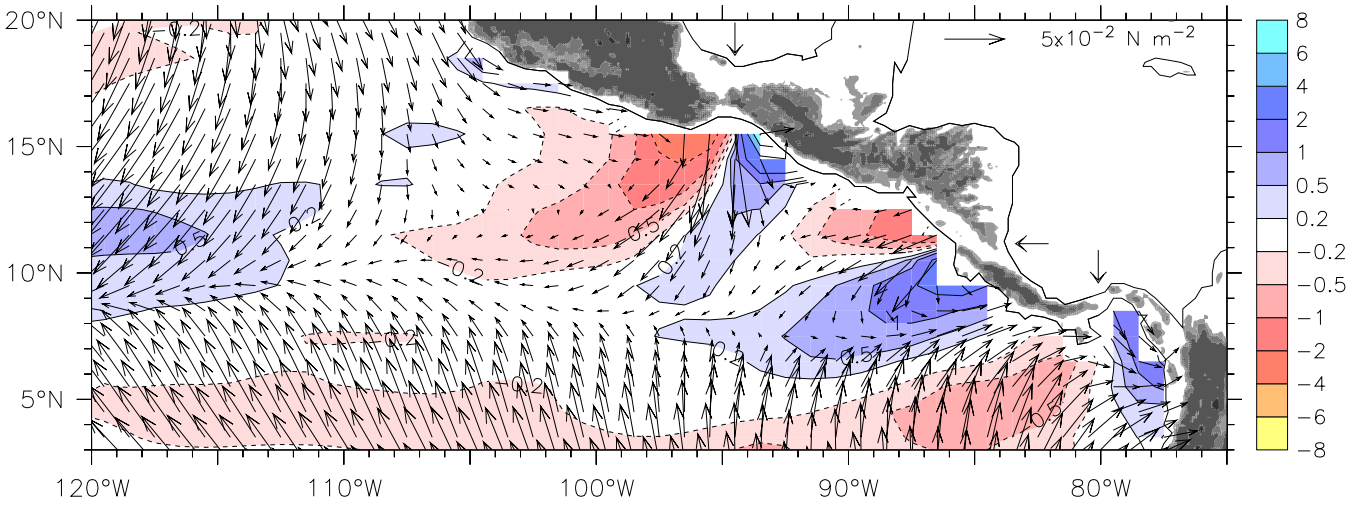

FIG. 5. Mean wind stress vectors and curl (colors) averaged over August 1999 through July 2000. Red shading shows negative (downwelling) curl and blue positive (upwelling) curl, in units of 10^{-7} N m^{-3}, with (stretched) color key at right. The scale vector ($5x10^{-2}$ N m^{-2}) is located in the Caribbean. The gray shading on land indicates altitudes greater than 250 m. The three mountain gaps referred to in the text are marked with arrows on the Caribbean side; from north to south these are denoted the Isthmus of Tehuantepec, the Gulf of Papagayo, and the Gulf of Panama.

FIGURE 6

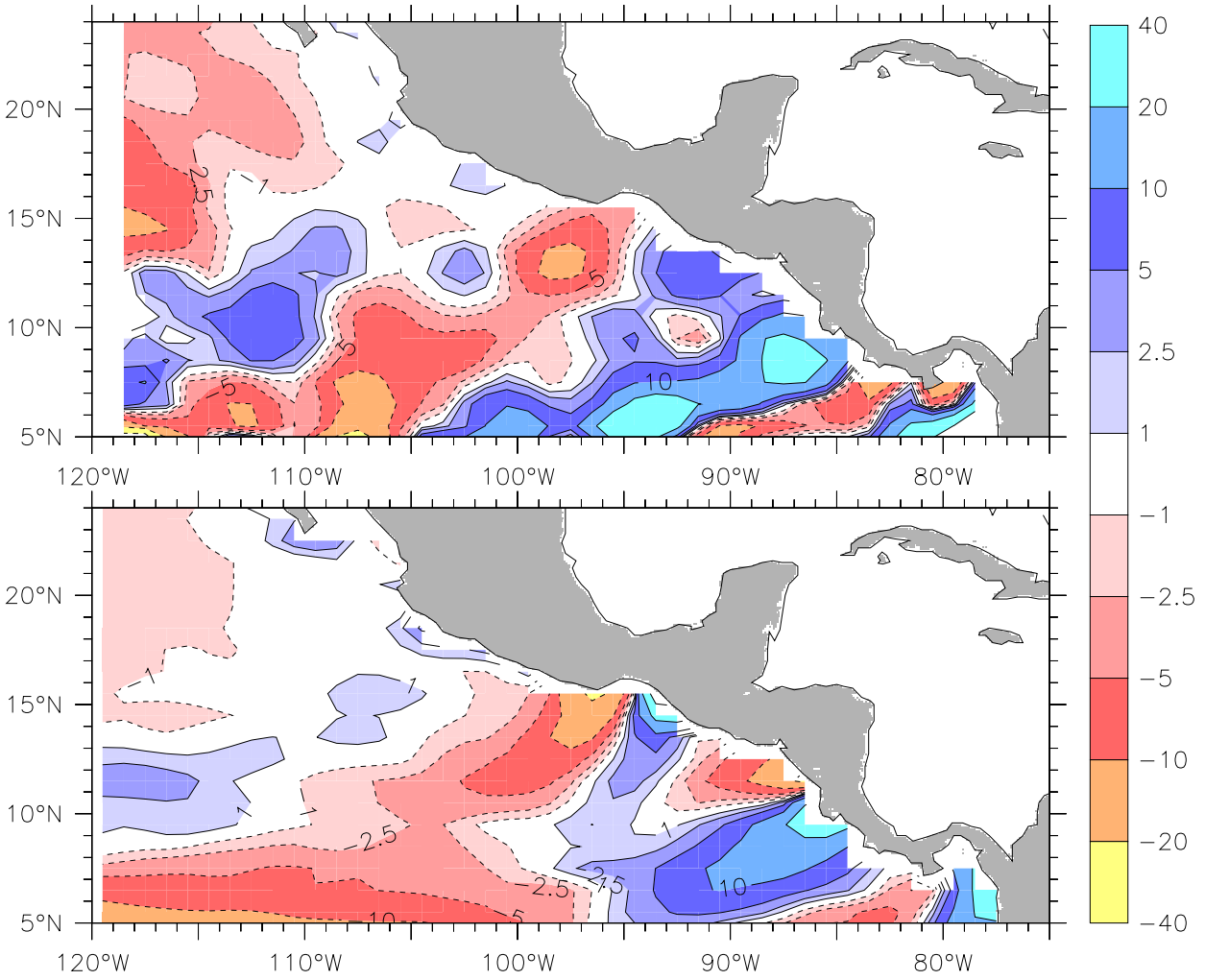

FIG. 6. Sverdrup balance comparison [left and right sides of Eq. (3)]. Top panel shows the "ocean term" ($\beta/f \int v_g \, dz$) calculated from the XBT data; bottom panel shows the "wind term" [$Curl(\tau/\rho f)$] calculated from the wind data, both in units of m month^{-1}. Blue shading indicates poleward transport and upwelling curl in the top and bottom panels respectively, red shading equatorward transport and downwelling curl. The color key for both quantities is at right.